

# DECLARATION AND POWER OF ATTORNEY/AGENT

As below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name: that I verily believe I am the original, first, and sole inventor (if only one name is listed below) or a joint inventor (if plural names are listed below) of the subject matter claimed and for which a patent is sought in the application entitled:

## **Determination of Metal Ions in Solution by Photoluminescence Anisotropy**

which application is:

☒ the attached application  
(for original application)

☐ application Serial No. \_\_\_\_\_ filed \_\_\_\_\_  
(for declaration not accompanying application)

that I have reviewed and understand the contents of the specification of the above identified application, including the claims, as amended by any amendment referred to above; that I acknowledge my duty to disclose information of which I am aware which is material to the examination of this application under 37 C.F.R. 1.56, that I hereby claim foreign priority benefits under Title 35, United States Code §119, §172, or §365 of any foreign application(s) for patent or inventor's certificate listed below and have also identified on said list any foreign application for patent or inventor's certificate of this invention having a filing date before that of the application on which priority is claimed:

Application Number	Country	Filing Date	Priority Claimed (yes or no)
--------------------	---------	-------------	---------------------------------

I hereby claim the benefit of Title 35, United States Code §119(e) of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in a listed prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge my duty to disclose any material information under 37 C.F.R. 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Application Number	Filing Date	Status (patented, pending, abandoned)
60/045,289	May 1, 1997	Pending

I hereby appoint Chalin A. Smith, Esq., Reg. No. P-41,569 as my agent to prosecute this application and transact all business in the Patent and Trademark Office connected therewith, and request that all correspondence about the application be addressed to:

Intellectual Property Division  
Office of Research and Development  
University of Maryland, Baltimore  
515 West Lombard Street, Suite 500  
Baltimore, MD 21201-1602  
Tel. 410-706-1874; Fax: 410-706-5035

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date 4/24/98  
Residence 7106 Bristol Road  
Baltimore, MD 21212  
Citizenship U.S.A.

First Inventor Richard B. Thompson  
Signature [Signature]  
Post Office Address 7106 Bristol Road  
Baltimore, MD 21212

Date \_\_\_\_\_  
Residence 25 Sherrin Road  
Newton, MA 02162  
Citizenship \_\_\_\_\_

Second Inventor Daniel Elbaum  
Signature \_\_\_\_\_  
Post Office Address 25 Sherrin Road  
Newton, MA 02162

Date x 4/29/98  
Residence 612 Talon Court  
Arnold, MD 21012  
Citizenship U.S.A.

Date \_\_\_\_\_  
Residence 160 Carnoustie Way  
Media, PA 19063  
Citizenship \_\_\_\_\_

Date \_\_\_\_\_  
Residence 9651 Hingston Downs  
Columbia, MD 21046  
Citizenship U.S.A.

Date \_\_\_\_\_  
Residence 3-D Beacon Village  
Burlington, MA 01803  
Citizenship P.R.C.

Date x April 29, 1954  
Residence 2803 North Calvert Street  
Baltimore, MD 21218  
Citizenship U.S.A.

Third Inventor Vincent J. Feliccia  
Signature x Vincent J. Feliccia  
Post Office Address 612 Talon Court  
Arnold, MD 21012

Fourth Inventor David Christianson  
Signature \_\_\_\_\_  
Post Office Address 160 Carnoustie Way  
Media, PA 19063

Fifth Inventor Marcia W. Patchan  
Signature \_\_\_\_\_  
Post Office Address 9651 Hingston Downs  
Columbia, MD 21046

Sixth Inventor Zhengfang Ge  
Signature \_\_\_\_\_  
Post Office Address 3-D Beacon Village  
Burlington, MA 01803

Seventh Inventor Badri P. Maliwal  
Signature x Badri P. Maliwal  
Post Office Address 2803 North Calvert Street  
Baltimore, MD 21218

## DECLARATION AND POWER OF ATTORNEY/AGENT

As below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name; that I verily believe I am the original, first, and sole inventor (if only one name is listed below) or a joint inventor (if plural names are listed below) of the subject matter claimed and for which a patent is sought in the application entitled:

### **Determination of Metal Ions in Solution by Photoluminescence Anisotropy**

which application is:

the attached application  
(for original application)

X application Serial No. 09/071,351 filed 4/30/98, and  
amended on          (for declaration not accompanying application)

that I have reviewed and understand the contents of the specification of the above identified application, including the claims, as amended by any amendment referred to above; that I acknowledge my duty to disclose information of which I am aware which is material to the examination of this application under 37 C.F.R. 1.56, that I hereby claim foreign priority benefits under Title 35, United States Code §119, §172, or §365 of any foreign application(s) for patent or inventor's certificate listed below and have also identified on said list any foreign application for patent or inventor's certificate of this invention having a filing date before that of the application on which priority is claimed:

Application Number	Country	Filing Date	Priority Claimed (yes or no)
--------------------	---------	-------------	---------------------------------

I hereby claim the benefit of Title 35, United States Code §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in a listed prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge my duty to disclose any material information under 37 C.F.R. 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Application Number	Filing Date	Status (patented, pending, abandoned)
--------------------	-------------	---------------------------------------

I hereby appoint Chalin A. Smith, Reg. No. 41,569 as my agents to prosecute this application and transact all business in the Patent and Trademark Office connected therewith, and request that all correspondence about the application be addressed to:

Office of Research and Development  
University of Maryland, Baltimore  
515 West Lombard Street, Suite 500  
Baltimore, Maryland 21201-1602

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date                       
Residence 7106 Bristol Road  
Baltimore, MD 21212  
Citizenship U.S.A.

First Inventor Richard B. Thompson  
Signature                       
Post Office Address 7106 Bristol Road  
Baltimore, MD 21212

Date 7/4/98  
Residence 25 Sherrin Road  
Newton, MA 02462 02462  
Citizenship U.S.A.

Second Inventor Daniel Elbaum  
Signature                       
Post Office Address 25 Sherrin Road  
Newton, MA 02462 02462

Date \_\_\_\_\_  
Residence 2803 North Calvert Street  
Baltimore, MD 21218  
Citizenship Malaysia

Date \_\_\_\_\_  
Residence 9651 Hingston Downs  
Columbia, MD 21046  
Citizenship U.S.A.

Date \_\_\_\_\_  
Residence 25 Sherrin Road  
Newton, MA 02162  
Citizenship \_\_\_\_\_

Date x 5-20-98  
Residence 160 Camoustie Way  
Media, PA 19063  
Citizenship x USA

Date \_\_\_\_\_  
Residence 3-D Beacon Village  
Burlington, MA 01803  
Citizenship P.R.C.

Third Inventor Badri P. Maliwal  
Signature \_\_\_\_\_  
Post Office Address 2803 North Calvert Street  
Baltimore, MD 21218

Fourth Inventor Marcia W. Patchan  
Signature \_\_\_\_\_  
Post Office Address 9651 Hingston Downs  
Columbia, MD 21046

Fifth Inventor Daniel Elbaum  
Signature \_\_\_\_\_  
Post Office Address 25 Sherrin Road  
Newton, MA 02162

Sixth Inventor David Christianson  
Signature x [Signature]  
Post Office Address 160 Camoustie Way  
Media, PA 19063

Seventh Inventor Zhengfang Ge  
Signature \_\_\_\_\_  
Post Office Address 3-D Beacon Village  
Burlington, MA 01803

Date \_\_\_\_\_  
Residence 612 Talon Court  
Arnold, MD 21012  
Citizenship U.S.A.

Date \_\_\_\_\_  
Residence 160 Carnoustie Way  
Media, PA 19063  
Citizenship \_\_\_\_\_

Date X May 2, 1998  
Residence 9651 Hingston Downs  
Columbia, MD 21046  
Citizenship U.S.A.

Date \_\_\_\_\_  
Residence 3-D Beacon Village  
Burlington, MA 01803  
Citizenship P.R.C.

Date \_\_\_\_\_  
Residence 2803 North Calvert Street  
Baltimore, MD 21218  
Citizenship U.S.A.

Third Inventor Vincent L. Feluccia  
Signature \_\_\_\_\_  
Post Office Address 612 Talon Court  
Arnold, MD 21012

Fourth Inventor David Christianson  
Signature \_\_\_\_\_  
Post Office Address 160 Carnoustie Way  
Media, PA 19063

Fifth Inventor Marcia W. Patchan  
Signature X Marcia W. Patchan  
Post Office Address 9651 Hingston Downs  
Columbia, MD 21046

Sixth Inventor Zhengfang Ge  
Signature \_\_\_\_\_  
Post Office Address 3-D Beacon Village  
Burlington, MA 01803

Seventh Inventor Badri P. Maliwal  
Signature \_\_\_\_\_  
Post Office Address 2803 North Calvert Street  
Baltimore, MD 21218

Date \_\_\_\_\_  
Residence 612 Talon Court  
Arnold, MD 21012  
Citizenship U.S.A.

Date \_\_\_\_\_  
Residence 160 Carnoustie Way  
Media, PA 19063  
Citizenship \_\_\_\_\_

Date \_\_\_\_\_  
Residence 9651 Hingston Downs  
Columbia, MD 21046  
Citizenship U.S.A.

Date X May 5, 78  
Residence 3-D Beacon Village  
Burlington, MA 01803  
Citizenship P.R.C.

Date \_\_\_\_\_  
Residence 2803 North Calvert Street  
Baltimore, MD 21218  
Citizenship U.S.A.

Third Inventor Vincent L. Feliccia  
Signature \_\_\_\_\_  
Post Office Address 612 Talon Court  
Arnold, MD 21012

Fourth Inventor David Christianson  
Signature \_\_\_\_\_  
Post Office Address 160 Carnoustie Way  
Media, PA 19063

Fifth Inventor Marcia W. Patchan  
Signature \_\_\_\_\_  
Post Office Address 9651 Hingston Downs  
Columbia, MD 21046

Sixth Inventor Zhengfang Ge  
Signature X [Signature]  
Post Office Address 3-D Beacon Village  
Burlington, MA 01803

Seventh Inventor Badri P. Maliwal  
Signature \_\_\_\_\_  
Post Office Address 2803 North Calvert Street  
Baltimore, MD 21218

Oct 17 00 11:56a

Richard Thompson

(410) 706-7122

P.2

001-17-2000 TUE 09:05 AM BSKB

FAX NO. 7032058050

P. 03

PATENT  
3645-101P

IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant: Richard B. THOMPSON  
Appl. No.: 09/071,351 Group: 1743  
Filed: April 30, 1998 Examiner: SODERQUIST  
For: DETERMINATION OF METAL IONS IN SOLUTION  
BY PHOTOLUMINESCENCE

REVOCATION OF POWER OF ATTORNEY, SUBSTITUTE POWER  
OF ATTORNEY, AND CHANGE IN CORRESPONDENCE ADDRESS

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

The Assignee of the above-identified patent application or issued patent, University of Maryland, Baltimore, having a business office at 520 West Lombard Street, Suite 500, Office of Research and Development, Baltimore, Maryland 21201-1602, as evidenced by the enclosed Certificate Under 37 C.F.R. § 3.73(b) showing chain of title, hereby revokes any and all previous powers of attorney for the above-identified patent application or issued patent and hereby appoints:

RAYMOND C. STEWART	(Reg. No. 21,066)	TERRELL C. BIRCH	(Reg. No. 10,382)
JOSEPH A. KOLASCH	(Reg. No. 22,463)	JAMES M. SLATTERY	(Reg. No. 28,380)
BERNARD L. SWEENEY	(Reg. No. 24,449)	MICHAEL K. MUTTER	(Reg. No. 29,600)
CHARLES GORENSTEIN	(Reg. No. 29,271)	GERALD M. MURPHY, JR.	(Reg. No. 28,477)
LEONARD R. SVENSSON	(Reg. No. 30,330)	TERRY L. CLARK	(Reg. No. 32,644)
ANDREW D. MEIKLE	(Reg. No. 32,868)	MARC S. WEINER	(Reg. No. 32,191)
JOE MCKINNEY MUNCY	(Reg. No. 32,110)	DONALD J. DALEY	(Reg. No. 34,313)
JOHN W. BAILEY	(Reg. No. 32,880)	JOHN A. CASTELLANO	(Reg. No. 35,094)
GARY C. YACURA	(Reg. No. 35,416)		

of the firm of Birch, Stewart, Kolasch & Birch, LLP as the attorneys of the Assignee to receive all correspondence relating to the above-identified application or patent and to transact all

Oct 17 00 11:57a

Dr. Richard Thompson

1410 06-7122

p.3

Oct 17 2000 TUE 09:05 AM BSKB

FAX NO. 7032058050

P. 04

Docket No. 3645-0101P

business in the United States Patent and Trademark Office connected therewith, with full power of substitution and revocation, and the Assignee ratifies any act done by the Assignee's attorneys in respect of this patent. The new correspondence address is:

BIRCH, STEWART, KOLASCH & BIRCH, LLP or Customer No. 2292  
P.O. Box 747  
Falls Church, VA 22040-0747

The undersigned (whose title is supplied below) is empowered to sign this Revocation and Substitute Power of Attorney on behalf of the Assignee.

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon

10/17/00  
Date

  
Signature

Joann A. Boughman, Ph.D.

Typed or printed name

Dean, Graduate School and Vice President, Academic Affairs  
Title

Enclosure:

Certificate Under 37 C.F.R. § 3.73(b)  
showing chain of title.

(Rev. 04/19/2000)



Oct 17 00 11:57a

Dr. Richard Thompson

(41) 706-7122

P. 4

OCT 17 2000 TUE 09:06 AM BSKD

FAX NO. 7032058050

P. 05

PATENT  
3645-0101P

IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant: Richard B. THOMPSON et al.  
App. No.: 09/071,351 Group: 1743  
Filed: April 30, 1998 Examiner: A. SODERQUIST  
Patent No.:  
Issue Date:  
For: DETERMINATION OF METAL IONS IN SOLUTION  
BY PHOTOLUMINESCENCE ANISOTROPY

CERTIFICATE UNDER 37 C.F.R. § 3.73(b)  
SHOWING CHAIN OF TITLE

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

University of Maryland, Baltimore, a University, certifies that it is the assignee of the patent application or issued patent identified above by virtue of either:

A. ☒ An assignment from the inventor(s) of the patent application or issued patent identified above. The assignment was recorded in the Patent and Trademark Office at Reel 9359, Frame 0389-0392, or for which a copy thereof is attached.

- OR -

B. ☐ A chain of title from the inventor(s), of the patent application or issued patent identified above, to the current assignee as shown below:

1. From \_\_\_\_\_

To: \_\_\_\_\_

The document was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

at 17 00 11:57a

Dr. Richard Thompson

(416) 706-7122

p.5

OCT 17-2000 TUE 09:06 AM BSKB

FAX NO. 7032058050

P. 08

Appl. No. 09/071,351

2. From: \_\_\_\_\_

To: \_\_\_\_\_

The document was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

3. From: \_\_\_\_\_

To: \_\_\_\_\_

The document was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are attached.

☐ Copies of assignments or other documents in the chain of title are attached

The undersigned has reviewed all the documents in the chain of title of the patent application or issued patent identified above and, to the best of undersigned's knowledge and belief, title is in the assignee identified above.

The undersigned (whose title is supplied below) is empowered to sign this certificate on behalf of the assignee.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

10/17/00  
Date

Joann A. Boughman  
Signature

Joann A. Boughman, Ph.D.

Typed or printed name

Dean, Graduate School and

Vice-President, Academic Affairs  
Title

(Rev. 04/10/2000)

Oct 17 00 11:58a

Oct 17-2000 TUE 09:07 AM BSKB

Dr. Richard Thompson

(410) 706-7122

P. 8

FAX NO. 7032058050

P. 08

### ASSIGNMENT

Whereas, We,

Richard B. Thompson  
7106 Bristol Road  
Baltimore, MD 21212

Vincent L. Fellicia  
612 Talon Court  
Arnold, MD 21012

Badri P. Maliwal  
2803 North Calvert Street  
Baltimore, MD 21218

hereinafter called Assignors, have co-invented certain improvements in:

### Determination of Metal Ions in Solution by Photoluminescence Anisotropy

and executed U.S. Provisional Patent Application Serial No. 60/045,289, filed May 1, 1997 for Letters Patent of the United States of America; and

Whereas, the University of Maryland, Baltimore, 520 West Lombard Street, Baltimore, MD 21201 (assignee), desires to acquire our entire right, title, and interest in the application and invention, and to any United States and foreign patents to be obtained therefor;

Now therefore, for One Dollar (\$1.00) and other valuable consideration, receipt whereof is hereby acknowledged:

We, the above named assignors, hereby sell, assign, and transfer to the above named assignee, its successors and assigns, our entire right, title and interest in the application and the invention disclosed therein for the United States of America and all countries foreign thereto, including rights of priority under the International Convention of Paris (1883) as amended, and we request the Commissioner of Patents to issue any Letters Patent granted upon the invention set forth in the application to the assignee, its successors and assigns; and we hereby agree that the assignee may apply for foreign Letters Patent on the invention and we will execute without further consideration all papers deemed necessary by the assignee in connection with the United States and foreign applications when called upon to do so by the assignee.

Signed and sealed

Date

4/29/98

Date

4/29/98

Date

4/29/98

*[Signature]*  
OPM/line

*[Signature]*  
Vincent J. Fellicia

State of Maryland

County of Baltimore City

Subscribed and sworn to before me this 29th day of April, 1998.

*[Signature]*  
Dorothy C. Edwards

Notary Public

Legalization/Commission not required for recording but is prima facie evidence of execution under 35 U.S.C. § 261).

PAGE 02

ORD JMB

5835-987-8 41 8-786-5835 10/16/2888 11:02

00 0000

0000 0000

0000-000-0000

0000 0000 0000 0000

Oct 17 00 11:58a

Dr. Richard Thompson

(410) 706-7122

p. 9

007-17-2000 TUE 09:07 AM BSKB

FAX NO. 7032058050

P. 10

### ASSIGNMENT

Whereas, I,

Marcia W. Patchan  
9651 Hingston Downs  
Columbia, MD 21046

hereinafter called assignor, have co-invented certain improvements in:

#### Determination of Metal Ions in Solution by Photoluminescence Anisotropy

and executed U. S. Provisional Patent Application No. 60/045,289 filed May 1, 1997 for Letters Patent of the United States; and

Whereas, University of Maryland, Baltimore, 520 West Lombard Street, Baltimore, MD 21201 (assignee), desires to acquire my entire right, title, and interest in the application and invention, and to any United States and foreign patents to be obtained therefor;

Now therefore, for One Dollar (\$1.00) and other valuable consideration, receipt whereof is hereby acknowledged.

I, the above named assignor, hereby sell, assign, and transfer to the above named assignee, its successors and assigns, my entire right, title and interest in the application and the invention disclosed therein for the United States of America, including the right to claim under 35 U.S.C. §119, and I request the Commissioner of Patents to issue any Letters Patent granted upon the invention set forth in the application to the assignee, its successors and assigns; and I hereby execute without further consideration all papers deemed necessary by the assignee in connection with the United States application when called upon to do so by the assignee.

Signed and sealed

Marcia W. Patchan

Date: May 2, 1998

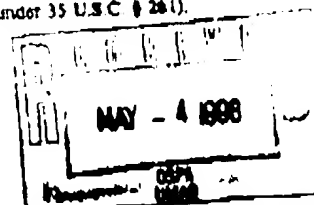
State of Maryland  
County of Howard

Subscribed and sworn to before me this 2nd day of May 1998

BLISS SCHEUMACK  
NOTARY PUBLIC, STATE OF MARYLAND  
My Commission Expires February 20, 2001

Bliss Scheumack  
Notary Public

This document is required for recording but is prima facie evidence of execution under 35 U.S.C. § 261.



Oct 17 00 11:59a

Dr. Richard Thompson

(41) 706-7122

p. 10

001-1-2000 TUE 09:08 AM BSKB

FAX NO. 7032058050

P. 11

### ASSIGNMENT

Whereas, I,

Zhengfang Ge  
3-D Beacon Village  
Burlington, MA 01803

hereinafter called assignor, have co-invented certain improvements in:

#### Determination of Metal Ions in Solution by Photoluminescence Anisotropy

and executed U. S. Provisional Patent Application No. 60/045,289 filed May 1, 1997 for Letters Patent of the United States; and

Whereas, University of Maryland, Baltimore, 520 West Lombard Street, Baltimore, MD 21201 (assignee), desires to acquire my entire right, title, and interest in the application and invention, and to any United States and foreign patents to be obtained therefor;

Now therefore, for One Dollar (\$1.00) and other valuable consideration, receipt whereof is hereby acknowledged.

I, the above named assignor, hereby sell, assign, and transfer to the above named assignee, its successors and assigns, my entire right, title and interest in the application and the invention disclosed therein for the United States of America, including the right to claim under 35 U.S.C. §119, and I request the Commissioner of Patents to issue any Letters Patent granted upon the invention set forth in the application to the assignee, its successors and assigns; and I hereby execute without further consideration all papers deemed necessary by the assignee in connection with the United States application when called upon to do so by the assignee.

Signed and sealed



Date May 1, 98

State of Massachusetts

County of Middlesex

Subscribed and sworn to before me this 5<sup>th</sup> day of May 1998.

  
Notary Public

(Copy of this notarization not required for recording but is prima facie evidence of execution under 35 U.S.C. § 261).

MARY T. RAYMOND  
Notary Public  
My Commission Expires April 23, 2004

Oct 17 03 11:59a

Dr. Richard Thompson

(410) 706-7122

P. 11

Oct 17-2000 TUE 03:08 AM BSKB

FAX NO. 7032058050

P. 12

Date: August 4, 1998

Express Mail Label No. EL076214261US

I hereby certify that this paper or fee is being deposited with the United States Postal Service using "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to "Box Assignment, Assistant Commissioner for Patents, Washington, D.C. 20231 "

Signed

Dorothy S. Doepke  
Dorothy S. Doepke

PAGE 07

ORD LMB

10/16/2000 11:02 410-706-5035

PAGE 11

ORD LMB

10/16/2000 10:55 410-706-5035

007-17-2000 TUE 09:08 AM BSK3

FAX NO. 7032058050

P. 13

PATENT  
3645-101P

## IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant: Richard B. THOMPSON  
Appl. No.: 09/071,351 Group: 1743  
Filed: April 30, 1998 Examiner: SODERQUIST  
For: DETERMINATION OF METAL IONS IN SOLUTION  
BY PHOTOLUMINESCENCE

REVOCATION OF POWER OF ATTORNEY, SUBSTITUTE POWER  
OF ATTORNEY, AND CHANGE IN CORRESPONDENCE ADDRESS

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

The Assignee of the above-identified patent application or issued patent, University of Pennsylvania, having a business office at 3700 Market Street, Suite 300, Intellectual Property Office, Philadelphia, Pennsylvania 19104-3147, as evidenced by the enclosed Certificate Under 37 C.F.R. § 3.73(b) showing chain of title, hereby revokes any and all previous powers of attorney for the above-identified patent application or issued patent, and hereby appoints:

RAYMOND C. STEWART	(Reg. No. 21,066)	TERRELL C. BIRCH	(Reg. No. 19,362)
JOSEPH A. KOLASCH	(Reg. No. 22,441)	JAMES M. SLATTERY	(Reg. No. 20,380)
BERNARD L. SWEENEY	(Reg. No. 24,448)	MICHAEL K. MUTTER	(Reg. No. 20,680)
CHARLES GORNSTEIN	(Reg. No. 29,271)	GERALD M. MURPHY, JR.	(Reg. No. 20,977)
LEONARD E. SVENSSON	(Reg. No. 30,330)	TERRY L. CLARK	(Reg. No. 32,644)
ANDREW C. HEIKLE	(Reg. No. 32,866)	MARC S. WEINER	(Reg. No. 32,181)
JCE MCKINNEY MUNCY	(Reg. No. 32,334)	DONALD J. DALEY	(Reg. No. 34,311)
JOHN W. BAYLEY	(Reg. No. 32,981)	JOHN A. CASTELLANO	(Reg. No. 35,094)
GARY D. YACURA	(Reg. No. 35,416)		

of the firm of Birch, Stewart, Kolasch & Birch, LLP as the attorneys of the Assignee to receive all correspondence relating to the above-identified application or patent and to transact all

Oct 17 00 01:29p

Dr. Richard Thompson

706-7122

P. 3

OCT-17-2000 TUE 09:09 AM BSKB

FAX NO. 7032058050

P. 14

Docket No. 3645-0101P

business in the United States Patent and Trademark Office connected therewith, with full power of substitution and revocation, and the Assignee ratifies any act done by the Assignee's attorneys in respect of this patent. The new correspondence address is:

BIRCH, STEWART, KOLASCH & BIRCH, LLP or Customer No. 2292  
P.O. Box 747  
Falls Church, VA 22040-0747

The undersigned (whose title is supplied below) is empowered to sign this Revocation and Substitute Power of Attorney on behalf of the Assignee.

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

10/18/00  
Date

Signature

LOUIS P. BERNEMAN

MANAGING DIRECTOR

CENTER FOR TECHNOLOGY TRANSFER

Title

Enclosure:

Certificate Under 37 C.F.R. § 3.73(b)  
showing chain of title.

(Rev. 07/19/2000)



OCT-17-2000 TUE 09:10 AM BSKB

FAX NO. 7032058050

P. 19

## ASSIGNMENT

In consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to Daniel Elbaum, the undersigned, hereby sell(s) and assign(s) to The Trustees of the University of Pennsylvania, a non-profit corporation organized and existing under the laws of the Commonwealth of Pennsylvania having a principal place of business at 3700 Market Street, Suite 300, Philadelphia, Pennsylvania 19104-1147 (the Assignee) their entire rights, title and interests

check applicable box(es) ☒ for the United States of America (as defined in 35 U.S.C. § 100),  
☒ and throughout the world.

in the invention known as Detection of Metal Ions and Other Analytes by Fluorescence Anisotropy for which application(s) for patent was made in the United States of America on May 1, 1997 (also known as provisional US application 60/045,289), and on April 20, 1998 (also known as Non-provisional Application No. 09/071,331), and in any and all applications thereon, in any and all Letters Patent(s) therefor, and in any and all renewals, extensions, renewals, continuations of such applications or Letters Patent(s) and divisionals and the continuing applications thereof in the full end of the term or terms for which such Letters Patent(s) issue, such entire right, title and interest to be held and enjoyed by the above-named Assignee to the same extent as they would have been held and enjoyed by the undersigned had this assignment and sale not been made.

The undersigned agree(s) to execute all papers necessary in connection with the application(s) and any continuing, divisional, renewal, reexamination or corresponding application(s) thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agree(s) to execute all papers necessary in connection with any interference that may be declared concerning the application(s) or any continuing, divisional, renewal or reexamination application thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.

The undersigned hereby represents that undersigned has (they have) full right to convey undersigned entire interest herein assigned, and that undersigned has (they have) not executed, and will not execute, any agreement in conflict therewith.

The undersigned hereby grant(s) Townsend and Townsend and Crow LLP, Two Embarcadero Center, Eighth Floor, San Francisco, CA 94111-3834, power to insert in this assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recording of this document.

IN WITNESS WHEREOF, executed by the undersigned on the date opposite her name.

Date 7/17/98Signature of Inventor: Daniel Elbaum

STATE OF PENNSYLVANIA

SS

COUNTY OF PHILADELPHIA:

On this 12TH day of JULY 19 98, before me, BERNADETTE P. PHILLIPS (Seal)

Daniel Elbaum

(I) personally known to me -OR- ( ) proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, execute the instrument.

WITNESS my hand and official seal.

Signature

Bernadette P. Phillips

(Seal)

My Commission Expires Oct 19, 2001

OCT-17-2000 TUE 09:11 AM BSK8

FAX NO. 7032058053

P. 20

## ASSIGNMENT

(in consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to David Christianson the undersigned, hereby sell(s) and assign(s) to The Trustees of the University of Pennsylvania, a non-profit corporation organized and existing under the laws of the Commonwealth of Pennsylvania having a principal place of business at 3700 Market Street, Suite 300, Philadelphia, Pennsylvania 19104-3147 (the Assignee) their entire right, title and interest

check applicable box(es) ☒ for the United States of America (as defined in 35 U.S.C. § 100),  
☒ and throughout the world.

in the invention known as Detection of Metal Ions and Other Analytes by Fluorescence Activated for which application(s) for patent was made in the United States of America on May 1, 1997, (also known as provisional US application 60/045,289), and on April 30, 1998 (also known as Non-provisional Application No. 09/071,351), and in any and all applications thereof, in any and all Letters Patent(s) therefor, and in any and all renewals, extensions, renewals, continuations of such applications or Letters Patent(s) and divisionals and the continuing applications thereof to the full end of the term or terms for which such Letters Patent(s) issue, such entire right, title and interest to be held and enjoyed by the above-named Assignee to the same extent as they would have been held and enjoyed by the undersigned had this assignment and sale not been made.

The undersigned agree(s) to execute all papers necessary in connection with the application(s) and any continuing, divisional, renewal, continuation or corresponding application(s) thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agree(s) to execute all papers necessary in connection with any interference that may be declared concerning the application(s) or any continuing, divisional, renewal or continuation application thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.

The undersigned hereby represents that undersigned has (they have) full right to convey undersigned entire interest herein assigned, and that undersigned has (they have) not executed, and will not execute, any agreement in conflict therewith.

The undersigned hereby grant(s) Townsend and Townsend and Crew LLP, Two Embarcadero Center, Eighth Floor, San Francisco, CA 94111-3834, power to insert in this assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

IN WITNESS WHEREOF, executed by the undersigned on the date opposite her name.

Date 6/2/98 Signature of Inventor: David Christianson

STATE OF PENNSYLVANIA.

SS

COUNTY OF PHILADELPHIA

On this 2nd day of JUNE 1998, before me, Felecia S. Williams (Seal)

Personally appeared David Christianson

I, Felecia S. Williams, personally known to me -OR- I ☒ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, execute the instrument.

WITNESS my hand and official seal

Signature

Felecia S. Williams (Seal)

Notary Seal  
 Felecia S. Williams, Notary Public  
 Philadelphia, Philadelphia County  
 My Commission Expires 12/31/00

PAGE 11

DND UND

5835-706-8035

8882/91/01 11:82

OCT-17-2000 TUE 09:09 AM BSXB

FAX NO. 7032058050

P 15

PATENT  
3645-0101P

## IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant: Richard B. THOMPSON et al.  
Appl. No.: 09/071,351 Group: 1743  
Filed: April 30, 1998 Examiner: A. SODERQUIST  
Patent No.:  
Issue Date:  
For: DETERMINATION OF METAL IONS IN SOLUTION  
BY PHOTOLUMINESCENCE ANISOTROPY

**CERTIFICATE UNDER 37 C.F.R. § 3.73(b)**  
**SHOWING CHAIN OF TITLE**

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

University of Pennsylvania, a University, certifies that it is the assignee of the patent application or issued patent identified above by virtue of either:

- A. ☒ An assignment from the inventor(s) of the patent application or issued patent identified above. The assignment was recorded in the Patent and Trademark Office at Reel 93b9, Frame 0398-0400, or for which a copy thereof is attached.

- OR -

- B. ☐ A chain of title from the inventor(s), of the patent application or issued patent identified above, to the current assignee as shown below:

1. From: \_\_\_\_\_

To: \_\_\_\_\_

The document was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

Appl. No. 09/071,351

2. From: \_\_\_\_\_  
To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.
3. From: \_\_\_\_\_  
To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

- ☐ Additional documents in the chain of title are attached.
- ☐ Copies of assignments or other documents in the chain of title are attached.

The undersigned has reviewed all the documents in the chain of title of the patent application or issued patent identified above and, to the best of undersigned's knowledge and belief, title is in the assignee identified above.

The undersigned (whose title is supplied below) is empowered to sign this certificate on behalf of the assignee.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

10/18/00  
Date

  
Signature

LOUIS P. BERNEMAN  
MANAGING DIRECTOR  
CENTER FOR TECHNOLOGY TRANSFER

Title

(Rev. 01/19/2000)

Oct 17 00 11:57a

Dr. Richard Thompson

(410) 706-7122

P. 6

OCT 17 2000 TUE 09:06 AM BSKB

FAX NO. 7032058050

P. 07



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

OCTOBER 26, 1998

PTAS

UNIVERSITY OF MARYLAND, BALTIMORE  
CHALIN A. SMITH, ESQ.  
OFFICE OF RESEARCH AND DEVELOPMENT  
515 WEST LOMBARD STREET, SUITE 500  
BALTIMORE, MD 21201-1602



UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION  
OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS  
AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER  
REFERENCED BELOW

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE  
INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA  
PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD  
FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY  
CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723.  
PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE,  
ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY,  
SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 08/04/1998

REEL/FRAME: 9359/0389  
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
THOMPSON, RICHARD B.

DOC DATE: 04/29/1998

ASSIGNOR:  
MALIWA, RADRT P

DOC DATE: 04/29/1998

ASSIGNOR:  
GE, ZIENG FANG

DOC DATE: 05/05/1998

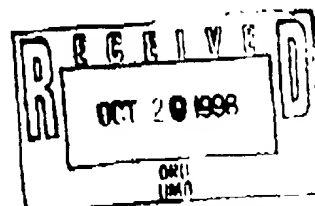
ASSIGNOR:  
FELICIA, VINCENT L.

DOC DATE: 04/29/1998

ASSIGNOR:  
PATCHAN, MARCIA W.

DOC DATE: 05/02/1998

ASSIGNEE:  
BALTIMORE, UNIVERSITY OF MARYLAND  
515 WEST LOMBARD STREET, SUITE 500  
OFFICE OF RESEARCH AND DEVELOPMENT  
BALTIMORE, MARYLAND 21201-1602



PAGE 02

ORD LMB

410-706-5855

10/16/98 11:02

Oct 17 00 11:58a

Dr. Richard Thompson

(410) 706-7122

P. 7

1007-17-2000 TUE 09:07 AM BSKB

FAX NO. 7032058050

P. 08

08-07-1998

SHEET

U.S. DEPARTMENT OF COMMERCE

100787101

Form 1007-17-2000 TUE 09:07 AM BSKB

1. Name of conveying party(ies): Richard B. Thompson Badr P. Mahwal Zhengfang Ge Additional number(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		2. Name and address of receiving party(ies): Name: <u>University of Maryland, Baltimore</u> Internal Address: <u>Office of Research and Development</u> Street Address: <u>515 West Lombard Street, Suite 500</u> City: <u>Baltimore</u> State: <u>MD</u> ZIP: <u>21201-1602</u> Additional number(s) & address(es) attached: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3. Nature of conveyance: <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name Other: _____ Execution Date: _____		4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: _____ A. Patent Application No.(s) <u>09/071,351 filed April 30, 1998</u> Provisional application: <input type="checkbox"/> B. Patent No.(s) _____ Additional numbers attached: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Name and address of party to whom correspondence concerning document should be mailed: Name: <u>Chad A. Smith, Esq.</u> Internal Address: <u>Office of Research and Development</u> <u>University of Maryland, Baltimore</u> Street Address: <u>515 West Lombard Street, Suite 500</u> City: <u>Baltimore</u> State: <u>MD</u> ZIP: <u>21201-1602</u>		6. Total number of applications and patents involved: _____ 7. Total fee (37 CFR 3.41) <u>\$40.00</u> <input type="checkbox"/> Enclosed <input checked="" type="checkbox"/> Authorized to be charged to deposit account 8. Deposit account number: <u>21-0684</u> (Attach duplicate copy of this page if paying by deposit account)	
DO NOT USE THIS SPACE			
9. Statement and signature: I, the undersigned, declare under penalty of perjury that the foregoing information is true and correct and any attached copy is a true copy of the original document. <u>Chad A. Smith, Esq.</u> <u>8-4-98</u> Name of Person Signing Signature Date Total number of pages comprising cover sheet: _____			

08/07/1998 SENT 00000011 210684 09071251  
01 FC:501 40.00 CH

RECEIVED  
OCT 20 1998

PAGE 08

ORD JMB

10/16/2000 11:02 410-706-5035

PAGE 08

ORD JMB

410-706-5035

10/16/2000 10:55

Oct 17 00 01:30p

Dr. Richard Thompson

(410) 706-7122

P. 8

007-17-2000 TUE 09:10 AM BSKB

FAX NO. 7032058050

P. 11



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

OCTOBER 26, 1998

PTA8

CHALIN A. SMITH, ESQ.  
OFFICE OF RESEARCH AND DEVELOPMENT  
515 WEST LOMBARD STREET  
SUITE 500  
BALTIMORE, MD 21201-1602



UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION  
OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS  
AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER  
REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE  
INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA  
PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD  
FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY  
CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 701-308-9723.  
PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE,  
ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY,  
SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 08/05/1998

REEL/FRAME: 9359/0398  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
ELBAUM, DANIEL

DOC DATE: 07/12/1998

ASSIGNOR:  
CHRISTIANSON, DAVID

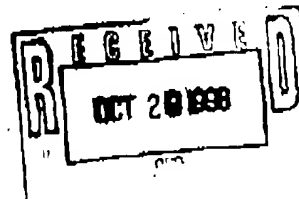
DOC DATE: 07/12/1998

ASSIGNEE:  
PENNSYLVANIA, UNIVERSITY OF  
3700 MARKET STREET, SUITE 300  
INTELLECTUAL PROPERTY OFFICE  
PHILADELPHIA, PENNSYLVANIA

19104-3147

SERIAL NUMBER: 09071351  
PATENT NUMBER:

FILING DATE: 04/30/1998  
ISSUE DATE:



Oct 17 00 01:31p

Dr. Richard Thompson

(410) 706-7122

P. 7

OCT-17-2000 TUE 09:10 AM BSKE

FAX NO. 7032058050

P. 13

08-07-1998

3HSDT

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

100787102

To the Honorable Commissioner of Patents and Trademarks: Please receive the attached original documents in copy thereof.

AUG 5 1998

1. Name of conveying party(ies):

Daniel Elbaum, David Christanson

Additional name(s) of conveying party(ies) attached?

( ) Yes ( ) No

1. Nature of conveyance:

(X) Assignment

( ) Merger

( ) Security Agreement

( ) Change of Name

Execution Date:

2. Name and address of receiving party(ies):

Name: University of Pennsylvania

Internal Address: Intellectual Property Office

Street Address: 3700 Market Street, Suite 300

City: Philadelphia State: PA ZIP: 19104-3147

Additional name(s) or address(es) attached: ( ) Yes ( ) No

1. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: -

A. Patent Application No(s): 09/071,351, filed April 30, 1998

Provisional application: B. Patent No(s): -

Additional numbers attached? ( ) Yes ( ) No

4. Name and address of party to whom correspondence concerning document should be mailed:

Name: Chalin A. Smith, Esq.

Internal Address: Office of Research and Development

University of Maryland, Baltimore

Street Address: 515 West Lombard Street, Suite 500

City: Baltimore

State: MD

ZIP: 21201-1602

6. Total number of applications and patents involved: -

7. Total fee (37 CFR 3.41) \$40.00

( ) Inclosed

(X) Authorized to be charged to deposit account

8. Deposit account number: 21-9684

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature  
to the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the  
original document.

Chalin A. Smith, Esq.

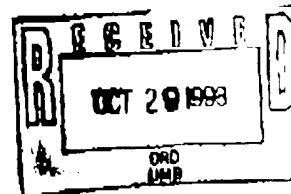
Name of Person Signing

Signature

B-498

Date

Total number of pages comprising cover sheet: 2

08/07/1998 53RTH 00000000 210644 00071241  
01 FCI501 40.00 CR

PAGE 29

ORD LMB

410-706-5835

20:11 0002/91/07